

FY 1998 Technology Deployment in Environmental Management

Solutions of the Future at the INEEL

Site Technology Coordination Group
U.S. Department of Energy, Idaho Operations Office



INEEL

VirtualwindoW

Problem: Telerobotic disassembly of the ANL-E CP-5 Research Reactor required independent operation of remote viewing and tool control systems.

Baseline Technology: Independent, hand operated controls for remote viewing and tool control systems.

Innovative Technology: The INEEL-developed VirtualwindoW stereo vision system responds to the operators gaze, automatically moving the field of view, and allowing uninterrupted manipulation of tool controls.

Comparison: The baseline technology requires the operator's hands to be removed from the tool controls in order to reposition the remote viewing system. VirtualwindoW allows the operator to change viewpoints instinctively, providing "telepresence" in the workspace.

Cost Savings: Deployment of the robotics system was estimated to reduce costs by \$166 K, as well as reduce worker exposure by an estimated 15 person-rem.

